Tech Report

DATE: 23 June 1997

TO: Sella Burchette, U.S. EPA/ERTC Work Assignment Manager

THROUGH: Vinod Kansal, REAC Section Leader

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SUBJECT: CORNELL/DUBILIER ELECTRONICS
WORK ASSIGNMENT # 2-262 - TRIP REPORT

BACKGROUND

The United States Environmental Protection Agency (EPA) Region II requested the assistance of the U.S. EPA/Environmental Response Team Center (ERTC)to determine the extent of contamination by polychlorinated biphenyls (PCBs), lead (Pb), and cadmium (Cd) in small businesses located in South Plainfield, NJ. The U.S. EPA/ERTC activated the Response Engineering and Analytical Contract (REAC) to perform air, chip and vacuum sampling at this location.

OBSERVATIONS AND ACTIVITIES

On 5 June 1997, REAC personnel, under the supervision of a U.S. EPA/ERTC Work Assignment Manager, conducted air sampling. Each location received two separate air samples. One sample was taken for PCBs, another for Pb and Cd. Ten sample locations were chosen, yielding a total of twenty samples. Six locations were selected within Building #5 (Columbia Carburetor Rebuilding). Two locations were sampled from Robalo Industries in Building 5A, and two outdoor ambient locations were also selected. Air sampling locations can be found in Table 1.

Air sampling for PCBs was conducted using personal sampling pumps and sampling trains consisting of tygon tubing, polyurethane foam (PUF) glass sampling cartridge assembly, and a 37-mm glass fiber particulate filter. Samples were analyzed using a modified U.S. EPA Toxic Organic Method 10 (U.S. EPA/TO-10), "Determination of Organochlorine Pesticides in Ambient Air Using Low Volume Polyurethane Foam (PUF). Sampling with Gas Chromatography/Electron Capture Detector (GC/ECD)". Each sample was collected at an average target flow rate of 2 L/min. The sampling event lasted 8 hours.

Air sampling for metals was conducted using personal sampling pumps and sampling trains consisting of tygon tubing, tube holder, and a 0.8 micron cellulose ester membrane filter. Samples were analyzed using a modified National Instituse for Occupational Safety and Health (NIOSH) Method 7300 "Elements (ICP)". Each sample was collected at an average target flow rate of 2 L/min. The sampling event lasted 8 hours.

On 9 June 1997, REAC personnel, under the supervision of a U.S. EPA/ERTC Work Assignment Manager, conducted chip and vacuum sampling. Chip sampling for PCBs and metals were conducted by removing

cement from the floors of buildings utilizing a hammer and chisel. The sample areas were approximately 6" X 6". At each location samples were collected from two layers. The first sample was taken from the top 1/4" of the sample area, the second sample was taken from a depth of approximately 1/4" to 3/4". The samples were analyzed for PCBs using Method 8080/SW-846 and for metals using Method SW-846. Seven locations were selected in three buildings using this method. Four locations were collected from within Columbia Carburetor Rebuilding in Building 5, two locations were selected from within Robalo Industries, Building 5A, and one location was sampled within Norpak in Building 18. Chip sampling locations can be found in Table 2.

Vacuum sampling for PCBs and metals were conducted by vacuuming accumulated dust from floors, shelves and other horizontal surfaces in the building, creating a composite sample. Three composite samples were taken in total. One from each of the following: Columbia, Robalo, and Norpak. The sample was collected in a vacuum bag and sieved through a 100 mesh sieve. The sample from Robalo was split after sieving for duplicate analysis to create four total samples. The samples were analyzed for PCBs using Method 8080/SW-846 and were analyzed for metals using Method SW-846. Vacuum sample locations can be found in Table 3.

cc: Central File WA 2-262

Table 1
Air Sampling Locations
Cornell/Dubilier Electronics
June 1997

Time	Building Number	Occupant	Sample Location	Sample Number
0738	5	Columbia	Storage bin by back bay door.	332 PCBs 331 Metals
0750	5	Columbia	Shelf, mid work area.	334 PCBs 333 Metals
0750	5	Columbia	Third mid bench, storage shelf.	336 PCBs 335 Metals
0758	5	Columbia	Storage bin by back room.	338 PCBs 337 Metals
0808	5	Columbia	Back room work bench behind stacked boxes.	340 PCBs 339 Metals
0814	5	Columbia	Pole 20, back room.	342 PCBs 341 Metals
0830	5A	Robalo	Pole to right of breaker panel, behind conveyer rolls.	344 PCBs 343 Metals
0834	5A	Robalo	Shelf inside front bay door.	346 PCBs 345 Metals
0843	NA	Outdoor Ambient	Trucking fence line.	348 PCBs 347 Metals
0846	NA	Outdoor Ambient	Roadway corner, trucking facility.	350 PCBs 349 Metals
0730	NA	NA	Lot/MS/MSD	9556 PCBs 9555 Metals
0730	NA	NA	Field Blank	9554 PCBs 9553 Metals

NA -- Not Applicable

Table 2
Chip Sampling Locations
Cornell/Dubilier Electronics
June 1997

Building Number	Occupant	Sample Location	Sample Number
5	Columbia	Next to pole 20. Top 1/4".	9894A PCBs 9894B Metals
5	Columbia	Next to pole 20. Bottom 1/4" to 3/4".	9895A PCBs 9895B Metals
5	Columbia	Next to pole 14, along wall. Top 1/4".	9896A PCBs 9896B Metals
5	Columbia	Next to pole 14, along wall. Bottom 1/4" to 3/4".	9897A PCBs 9897B Metals
5	Columbia	Beam near office. Top 1/4".	9898A PCBs 9898B Metals
5	Columbia	Beam near office. Bottom 1/4" to 3/4".	2343A PCBs 2343B Metals
5	Columbia	Right side of water fountain. Top 1/4".	2344A PCBs 2344B Metals
5	Columbia	Right side of water fountain. Bottom 1/4" to 3/4".	2345A PCBs 2345B Metals
5A	Robalo	Right side wall of office bathroom. Top 1/4".	2346A PCBs 2346B Metals
5A	Robalo	Right side wall of office bathroom. Bottom 1/4" to 3/4".	2347A PCBs 2347B Metals
5A	Robalo	Floor to left of garage door. Top 1/4".	2348A PCBs 2348B Metals
5A	Robalo	Floor to left of garage door. Bottom 1/4" to 3/4".	2349A PCBs 2349B Metals
18	Norpak	Next to workbench. Top 1/4".	2350A PCBs 2350B Metals
18	Norpak	Next to workbench. Bottom 1/4" to 3/4".	2351A PCBs 2351B Metals

Table 3
Vacuum Sampling Locations
Cornell/Dubilier Electronics
June 1997

Building Number	Occupant	Sample Location	Sample Number

5	Columbia	Composite.	9889B PCBs 9889A Metals
5A	Robalo	Composite.	9890B PCBs 9890A Metals
5A	Robalo	Composite.	9891B PCBs 9891A Metals
18	Norpak	Composite.	9892B PCBs 9892A Metals